

PRODUCTION OF HIGH-STRENGTH SINTERED MEMBER

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Abstract of JP61264101

PURPOSE: To produce a sintered member having excellent strength characteristics by heating and sintering a metallic green compact to heat and soften the surface part thereof, mounting the compact to dies and forging the molding thereby making compact the surface part and increasing the pores in the inside.

CONSTITUTION: A lubricating material is added to a metallic powder raw material for powder metallurgy and the mixture is subjected to compacting to about 5.0-7.5g/cm³ density. The compact is heated in a non-oxidizing atmosphere to progress the sintering reaction and to unite the mixture. The surface part of such sintered member is heated and softened by a surface heating means such as high-frequency heating so that the surface part and the inside part are formed to have different deformation resistances. Such sintered member is forged to make compact only the heated and softened surface part and to increase the pores in the inside which is not heated and softened. The strength characteristics such as tensile strength and resistance to fatigue are thereby improved without spoiling the low-cost characteristic and lightweight characteristic of the sintered member.

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